UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
LAVIN, CHRISTOPHER L

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/903,122	OVERTON ET AL.
	Examiner	Art Unit
	Christopher L. Lavin	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 January 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-32</u> is/are pending in the application.

  4a) Of the above claim(s) <u>12</u> is/are withdrawn from consideration.

5)☒ Claim(s) <u>16</u> is/are allowed.

6)☒ Claim(s) <u>1-5,7-9,11-23,25 and 27-32</u> is/are rejected.

7)☐ Claim(s) <u>6,10,24,26 and 27</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>10 July 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   The following quotations of 37 CFR § 1.75(a) is the basis of objection

(a) The specification must conclude with a claim particularly pointing out and distinctly claming the subject matter which the applicant regards as his invention or discovery.

Claim 8 is objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery. It appears the applicant mistakenly forgot to include the content of claim 7 when writing up claim 8, because of this claim 8 currently suffers from lack of antecedent basis for "the foreground parameter". Inserting the content of claim 7 would correct this problem.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

4.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.   Claim 1 – 3, 7,11 –15 and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharir (6,297,853).

        In regards to claim 1, Sharir in the paragraph starting at column 8, line 51 discloses a method for tracking the duration an advertisement is seen in a video stream. Sharir in the paragraph starting at column 4 line 46 discloses a databank of ad locations for a particular venue. Such a databank acts as a model of the target areas of the site. Sharir in the paragraph starting at column 12, line 34-36 discloses summing the time a target area is seen. Inherent in a summation of time is a counter, as the system Sharir disclosed is real-time (paragraph starting at column 7 line 7) it must increment the counter automatically. Sharir also discloses in the paragraph starting at column 11 line 33 that a field is analyzed for inclusion in one or more target areas. In the paragraph starting at column 18, line 7 Sharir discloses inserting an advertisement on a virtual surface, which does not physically exist. Although Sharir does not describe the entire method disclosed above in connection with the operation described in the

aforementioned paragraph it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the two embodiments of Sharir so that ads inserted onto a virtual surfaces would also be tracked in a similar manner to those described in the primary embodiment of Sharir. Keeping track of the duration an ad is shown on a virtual surface would be just as useful for fee calculation as ads on physical surfaces.

In regards to claim 2, Sharir in the sentence starting at column 12, line 32 discloses calculating an occlusion parameter of the target area.

In regards to claim 3, Sharir in the sentence starting at column 12, line 27 discloses that a fee may be calculated based on the duration an ad has been seen.

In regards to claim 7, Sharir, as shown in the response to claim 2, discloses that an occlusion parameter is calculated. An occlusion parameter describes how much of the foreground, in this case an ad, is seen. Thus the occlusion parameter is a foreground parameter and meets the requirements of claim 7.

In regards to claim 11, Sharir at column 12, lines 27 - 32 discloses that an occlusion threshold of "at least 50%." If the occlusion parameter exceeds this threshold, then no fee is charged. This is equivalent to disallowing the increment as called for in claim 11.

In regards to claim 13, Sharir in the paragraph starting at column17 line 42 discloses that the ads shown in a particular target area may vary overtime as may a particular ad's location.

In regards to claim 14, Sharir in the paragraph starting at column 7 line 7 discloses that the system is meant to work in real time.

In regards to claim 15, Sharir in the paragraph starting at column 8 line 51 discloses collecting statistics on the advertisements shown. In the paragraph starting at column17 line 42, Sharir discloses a schedule for displaying the ads.

In regards to claim 17, Sharir, as previously shown in response to claims 10 and 13, discloses a method of tracking the duration an ad has been shown, which allows for the ad to be moved to different target areas. Inherent in such a design is the ability to track the total duration of an ad, regardless of how many different locations it is shown in.

In regards to claim 18, claim 18 is rejected for the same reasons as claim 1. The argument analogous to that presented above for claim 1 is applicable to claim 18.

In regards to claim 19, Sharir in the sentence starting at column 10 line 5 discloses that the image capture and image insertion modules are contained within software. As shown previously in claim 1 the system keeps track of the duration of each ad, therefore a duration module must be included within the software system Sharir discloses.

In regards to claim 20, Sharir, as shown in claim 19, discloses a system of modules to handle the entire process of image insertion into a stream. Since Sharir discloses a duration module, that module must be contained somewhere within the image insertion system.

6.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharir in view of Agnihotri (6,731,788).

In regards to claim 4, Sharir in the sentence starting at column 12 line 32 discloses an occlusion parameter using the occluded area and the target area. This teaching has everything in common with claim 4 except for explicitly stating that the areas would be calculated based on the pixel count of the two regions.

Agnihotri teaches in his prior art (column 10 lines 30 – 32) that pixel count can be used to represent the area of a particular structure.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to use pixel count (as taught by Agnihotri) to compute the occlusion parameter. As pixel count is readily available in the system described by Sharir using pixel count would be an easy and efficient way to compute the area of regions that are often nonstandard shapes.

In regards to claim 5, Sharir in the sentence starting at column 12 line 32 discloses that a ratio of the occluded area and the target area are used to find the occlusion parameter.

7.   Claims 21, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharir in view of Gloudemans (6,266,100).

In regards to claim 21, Sharir in the figure 10B discloses the image separator and the occlusion separator modules set forth in claim 21. The Image separator consists of steps 290 through 340 in figure. A target area is identified, segmented and in step 330 an advertisement is incorporated into the target area. The occlusion separator module

consists of steps 350 – 360. In step 350 the occlusion parameter is determined. Finally at column 4 lines 46 – 50 Sharir discloses a model renderer. However, Sharir does not disclose a three dimensional model of the venue.

Gloudemans teaches (col. 7, lines 25 – 53; col. 8, lines 43 – 65) that a three-dimensional model of a stadium should be used for ad placement.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the ad insertion system of Sharir to use a three-dimensional model of the venue. Gloudemans uses the three-dimensional model to accurately determine what a camera is pointed at, and then correctly insert that ad. Modifying Sharir to include this operation would simplify the image processing needed to determine a target area as well as make the process more accurate as the system would be able to determine precisely where a camera is pointed.

In regards to claim 22, Sharir in the sentence starting at column 12 line 32 discloses calculating an occlusion parameter of the target area.

In regards to claim 31, Sharir in the paragraph starting at column 8, line 51 discloses a module for tracking the duration an advertisement is seen in a video stream. Sharir in the paragraph starting at column 4 line 46 discloses a databank of ad locations for a particular venue. Such a databank acts as a model of the target areas of the site. Sharir in the paragraph starting at column 12, line 34-36 discloses summing the time a target area is seen. Inherent in a summation of time is a counter, as the system Sharir disclosed is real-time (paragraph starting at column 7 line 7) it must increment the counter automatically. Sharir also discloses in the paragraph starting at column 11 line

33 that a field is analyzed for inclusion in one or more target areas. Sharir in the sentence starting at column 12, line 32 discloses calculating an occlusion parameter of the target area. Sharir at column 12, lines 27 - 32 discloses that an occlusion threshold of "at least 50%." If the occlusion parameter exceeds this threshold, then no fee is charged. This is equivalent to determining the parameter based on the amount of time the target is within the image stream and the occlusion. However, Sharir does not disclose a three dimensional model of the venue nor camera's position used with the model.

Gloudemans teaches (col. 7, lines 25 – 53; col. 8, lines 43 – 65) that a three-dimensional model of a stadium should be used for ad placement. Gloudemans also discloses that camera view information is used in connection with the model to determine target areas.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the ad insertion system of Sharir to use a three-dimensional model of the venue which takes into account camera view information. Gloudemans uses the three-dimensional model to accurately determine what a camera is pointed at, and then correctly insert an ad. Modifying Sharir to include this operation would simplify the image processing needed to determine a target area as well as make the process more accurate as the system would be able to determine precisely where a camera is pointed.

In regards to claim 32, In the paragraph starting at column 18, line 7 Sharir discloses inserting an advertisement on a virtual surface, which does not physically

exist. Although Sharir does not describe the entire method disclosed above in connection with the operation described in the aforementioned paragraph it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the two embodiments of Sharir so that ads inserted onto a virtual surfaces would also be tracked in a similar manner to those described in the primary embodiment of Sharir. Keeping track of the duration an ad is shown on a virtual surface would be just as useful for fee calculation as ads on physical surfaces.

8.   Claims 23, 25, 28 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharir in view of Gloudemans as applied to claims 21 and 22 above, and further in view of Agnihotri.

In regards to claim 23, please see the rejection of claim 5.

In regards to claim 25, Sharir, as shown in the response to claim 22, discloses that an occlusion parameter is calculated. The occlusion parameter is a foreground parameter, as explained earlier.

In regards to claim 28, please see the rejection of claim 11.

In regards to claim 29, please see the rejection of claim 12.

In regards to claim 30, please see the rejection of claim 17.

9.   Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharir in view of Azegami (4,693,378).

In regards to claims 8 and 9, Sharir in the paragraph starting at column 8, line 51 discloses a method for tracking the duration an advertisement is seen in a video stream. Sharir in the paragraph starting at column 12, line 34-36 discloses summing the time a

target area is seen. Inherent in a summation of time is a counter, as the system Sharir disclosed is real-time (paragraph starting at column 7 line 7) it must increment the counter automatically. Sharir also discloses in the paragraph starting at column 11 line 33 that a field is analyzed for inclusion in one or more target areas. Sharir, as shown in the response to claim 2, discloses that an occlusion parameter is calculated. An occlusion parameter describes how much of the foreground, in this case an ad, is seen. Thus the occlusion parameter is a foreground parameter and meets the requirements of claim 7. Sharir discloses (col. 4, line 57 – col. 5, line 31) that the size of an ad area is determined so the ad can be properly sized and scaled to fit the area. Sharir however does not disclose a foreground parameter which is based on pixel count of the target area and pixel count of the at least one field.

Azegami teaches (col. 8, lines 33 – 57) that the size of an area of interest is calculated by counting the number of pixels in the area of interest. The size is further classified by finding the percentage of the area of interest to the rest of the image. This is a ratio of the target area pixel count to the rest of the image pixel count.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to classify the size of an area (as taught by Azegami) in the method disclosed by Sharir. By classifying the size of an area, quickly (counting pixels is a very quick operation for a computer) the method disclosed by Sharir can decide if the area is too small to fit a legible ad into. No advertiser would want to pay to display an ad that viewers can't see, preventing this situation would satisfy advertisers.

Allowable Subject Matter

10.   Claim 16 allowed.

11.   Claims 6, 10, 24, 26, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The art of record does not teach nor does it suggest the specific features called for in the claims, particularly implementing a counter designated with keeping track of on air time of a target area where incrementing of the counter is controlled by a function of the occlusion or foreground parameter.

Response to Arguments

12.   Applicant's arguments filed 01/27/05 have been fully considered but they are not persuasive.

13.   Please see the rejection of claim 21 for reasons that Gloudemans can be combined with Sharir. Motivation was provided.

14.   In the course of an updated search the examiner has come to the realization that claims 8 and 9 are not allowable. The examiner apologizes for any inconvenience this causes the applicant.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLL

BRIAN WERNER
PRIMARY EXAMINER